SUPERFUND PROPOSED PLAN

CURCIO SCRAP METAL, INC.
SADDLE BROOK, NEW JERSEY

USEPA - REGION II FEBRUARY 8, 1991

PURPOSE OF PROPOSED PLAN

EPA ANNOUNCES PROPOSED PLAN

This proposed plan describes the preferred option for addressing soils contaminated with hazardous substances including,but not limited to polychlorinated biphenyls (PCBs), metals and volatile organic compounds (VOCs), at the Curcio Scrap Metal, Inc., site (Site). This Site is located in the township of Saddle Brook in Bergen County, New Jersey. This document is issued by the United States Environmental Protection Agency (EPA), the lead agency for Site activities, and the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final remedy for the Site only after the public comment period has ended and the information submitted during this time has been reviewed and considered. This proposed plan outlines the remedial alternatives evaluated for addressing contaminated soils and provides the rationale used to determine EPA's preferred alternative.

Site Location Map

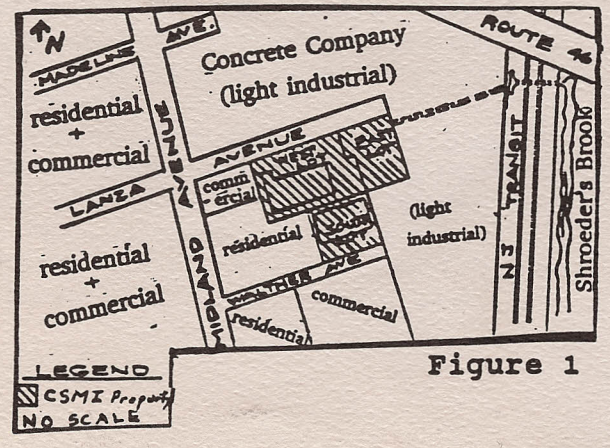

Figure 1

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). This Proposed Plan summarizes information that can be found in greater detail in the Focused Remedial Investigation/Feasibility Study (RI/FS) Report and other documents contained in the Administrative Record for this Site.

DATES TO MARK YOUR CALENDAR

FEB. 8 - MARCH 11, 1991: Public comment period on proposed remedial alternatives.
FEB. 21, 1991: Public meeting at Saddle Brook Free Public Library.

EPA and NJDEP encourage the public to review these and other documents in the Administrative Record in order to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted there. The Administrative Record, contains the information upon which the selection of the response action will be based. The record will be available at the following locations:

Saddle Brook Free Public Library
340 Mayhill Street
Saddle Brook, New Jersey 07662
(201) 843-3287
Hours: Mon - Thurs: 9:00am - 5:00pm,
7:00pm - 9:00pm
Fri - Sat: 9:00am - 3:00pm

and can also be found at:

U.S. EPA - Region II
26 Federal Plaza
New York, New York 10278
(212) 264 - 1301
Hours: Mon - Fri, 9:00am - 5:00pm

COMMUNITY ROLE IN THE SELECTION PROCESS:

EPA and NJDEP rely on public input to ensure that the remedy selected for each Superfund site is fully understood and that the agencies have considered the concerns of the local community, as well as ensuring that the selected remedy provides an effective solution.

EPA has set a public comment period from February 8, 1991 to March 11, 1991 to encourage public participation in the selection process. The comment period includes a public meeting during which EPA will discuss the focused RI/FS report, the Proposed Plan, answer questions, and accept both oral and written comments. The public meeting is scheduled for February 21, 1991 and will be held at the Saddle Brook Free Public Library in Saddle Brook, New Jersey.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record Of Decision (ROD). The ROD is the document that presents EPA's final selection for response action. Written comments on this Proposed Plan should be addressed to:

Mary Anne Rosa, Project Manager
U.S. Environmental Protection Agency
Region II - Room 13-100
26 Federal Plaza
New York, New York 10278

SITE BACKGROUND

The Site includes, but is not limited to the real property (Property) where two active scrap metal recycling businesses operate, Curcio Scrap Metal, Inc., (CSMI) and Cirello Iron and Steel Company (CISC). The Property is approximately one acre in size and contains two single story buildings which are used primarily as warehouses. It is bordered by a concrete company on the north, Walther Avenue on the south, Midland Avenue on the west and a drainage ditch on the east. The area surrounding the Property is comprised of residential homes and industrial properties.

The Property is subdivided into the East, West and South Lots. CSMI and CISC conduct their business from the buildings located on the West and South Lots (see Figure 1). With the exception of two narrow passageways, all the areas of the West and South Lots are paved. The East Lot, the area where scrap metal salvaging operations of CISC and CSMI occur, is not paved. The active section of the East Lot measures approximately 90 by 110 feet. The metal cutting area and the metal compacting area are also located on the East Lot. A ditch, located near this metal cutting area, drains surface water from the Property into a culvert that runs under the concrete company's property. This drainage empties into Schroeder's Brook, a few hundred feet away from the Property. The remainder of the East Lot is occupied by piles of scrap metal in various stages of salvage.

The locations of the piles are changed frequently as scrap metal arrives daily. A large crane with a magnet operates in the center of the East Lot, moving scrap metal to various piles and containers for recycling. Two roll off containers are located in the southeastern section of the East Lot. These containers are removed and replaced as they are filled with scrap metal. Bulldozers and other heavy equipment are also used to move the scrap metal piles around the Property. The topography of the East Lot varies as scrap metal piles and surficial soil is moved.

Salvaging operations began at the Property in the early 1950's, prior to this time the land was used for dairy farming. The East and West Lots were purchased in 1952 and the South Lot was purchased in 1981. Initially, only rags and paper were recycled. Later, aluminum and

copper were stored and recycled at the Property. Today, CSMI and CISC deal with the collection and compaction of scrap iron, copper aluminum, and other ferrous and non-ferrous metals.

From October 1982 to August 1989 at least three documented PCB spills have occurred on the Property. Samples of the spilled oil indicated concentrations of PCB Arochlor 1260 at 105 parts per million (ppm) and Arochlor 1242 at 47 ppm. Further investigation revealed that transformers containing PCBs were purchased by SECO Corporation from Consolidated Edison Company of New York, Inc. and subsequently sold to and transported to CSMI by SECO. Soil samples indicated the presence of hazardous substances; for example, tetrachloroethene and heavy metals such as lead, copper and nickel were detected. The presence of these contaminants on the Property indicate the potential for ground water and surface water contamination.

The Site is situated above a fractured bedrock aquifer called the Brunswick Formation. An aquifer is a geological formation composed of materials such as sand, soil or gravel capable of supplying ground water to wells and springs. The Brunswick Formation aquifer, which supplies water to public and private wells in the area, is a consolidated formation in which ground water is stored in, and moves through interconnected fractures in the bedrock.

The Site was placed on the National Priorities List (NPL) in July 1987. On May 27, 1988, EPA entered into an Administrative Order on Consent (ACO) with the respondents being CSMI, SECO Corporation and Consolidated Edison Company of New York. The ACO required the performance of a Remedial Investigation and Feasibility Study (RI/FS) at the Site. The RI field activities started on July 19, 1989. The Phase I RI characterized the extent of soil contamination through the collection of soil samples from 47 soil borings obtained at two foot vertical intervals. Thirty six of those samples were collected from the East Lot. Each sample was analyzed for organics, inorganics, pesticides/PCBs and Total Petroleum Hydrocarbons (TPHs). Each boring extended to the water table (approximately six feet). The soil samples contained a variety of organic and inorganic hazardous substances with a wide range of concentrations. The Phase II RI supplemented the results of Phase I and included the installation of seven borings off the Property. These additional off-Property borings were installed to determine if the contamination migrated off the Property. The highest off-Property level of PCBs found was 3.6 ppm at 0 - 2 feet.

SITE CHARACTERIZATION:

The highest concentrations of VOCs were detected in the East Lot. Overall, one-third of the soil samples taken from the zero to two foot interval exceeded 1 ppm for total volatiles. Chloroform was detected at up to 2.2 ppm; total xylenes at 23 ppm; ethylbenzene at 4.1 ppm; tetrachloroethylene at 28 ppm; 1,2-dichloro-ethane at 4.9 ppm; trichloroethylene at 6 ppm and 1,1,1-trichloroethane at 1.4 ppm.

The highest concentrations of semi-volatile organic compounds were also detected in the East Lot. Overall, three-quarters of the soil samples taken from the zero to two foot interval exceeded 10 ppm for total semi-volatiles. Fluoroanthene was detected at up to 15 ppm; pyrene at 23 ppm benzo(a)anthracene at 7.3 ppm; benzo(a)pyrene at 6.2 ppm; chrysene at 8 ppm; benzo(b)fluoranthene 11 ppm; fluorene 22 ppm and phenanthrene 17 ppm.

Metals contamination was detected in borings drilled in the East Lot. At a depth of 0 - 2 feet; mercury was detected at 466 ppm, arsenic at 55.6 ppm and lead at 39,300 ppm. At a depth ranging from 2 - 4 feet, barium at 2,600 ppm and cadmium at 133 ppm and copper at 26,100 ppm, were detected.

The maximum concentrations of PCBs in the soil and the depth at which they were detected in the East Lot are as follows:

PCBs:	Depth	Concentration
	0 - 2 feet	- - 6200 ppm
	2 - 4 feet	- - 3200 ppm
	4 - 6 feet	- - 124 ppm

The borings were terminated when the water table was encountered. The off-Property soil results yield a maximum concentration of Arochlor 1242 to be 3.6 ppm. Four ground water monitoring wells were installed as part of the Phase I RI. The samples from these wells revealed vinyl chloride at levels of 160 parts per billion (ppb) and PCBs in filtered samples at 7.6 ppb. Sediment samples from a surface water outfall pipe revealed the presence of VOCs, semivolatiles and PCBs. The concentration of PCBs ranged up to 12 ppm in the culvert. The water from the off-Property discharge point flows into Schroeder's Brook, where further sampling will be performed downstream to determine the extent of contamination.

SCOPE AND ROLE OF ACTION:

The Focused Feasibility Study (FFS) for soil has been drafted and is available in the Administrative Record. The data concerning the ground water is still being analyzed.

The remedial action for addressing the contamination at the Site will be addressed in two operable units (OUs). The first OU will address soil contamination. The second OU, to be evaluated at a later date, will address ground water and surface water contamination. Any residual contaminated soil in the saturated zone will be addressed as part of the second OU remedial investigation.

SUMMARY OF SITE RISKS:

EPA conducted an Endangerment Assessment to estimate the risks associated with current Site conditions. The baseline risk assessment estimates the health and environmental risk which could result from the contamination at the Site if no remedial action is taken.

The assessment began with selecting indicator chemicals which would be representative of Site risks. These chemicals were identified based on factors such as potential for exposure to receptors, toxicity, concentration and frequency of occurrence. These contaminants included PCBs, metals, VOCs and semivolatiles. Several of the contaminants including PCBs are known to cause cancer in laboratory animals and are suspected to be human carcinogens.

This Endangerment Assessment evaluated the health effects which could result from exposure to contamination as a result of contaminated soil coming in contact with the skin (dermal contact) and from incidental ingestion of the soil. Two exposure scenarios were evaluated, the first was related to on-Site workers, the second to trespassing by young adults. The risk assessment also considered the effect to passers-by to the area surrounding the Site. Drinking water pathways were also evaluated because contamination was detected in ground water monitoring wells.

The results of the risk assessment indicate that the contaminated soils and ground water at the Site pose an unacceptable risk to human health. The carcinogenic risk to workers was estimated to be 2×10^{-2} while the carcinogenic risk to trespassers was 6×10^{-3}. The Hazard Index, which reflects noncarcinogenic effects for a human receptor, was estimated to be 1.0. Current Federal guidelines for acceptable exposures are a maximum health Hazard Index equal to 1.0 and an individual lifetime excess carcinogenic risk in the range of 1.0×10^{-4} to 1×10^{-6}.

In establishing remedial action goals for this Site, EPA has determined that the unsaturated soils contaminated with PCBs greater than or equal to 10 ppm should be remediated. EPA has developed guidelines for remedial actions at Superfund sites with PCB contamination. A cleanup range, for a mixed residential and light industrial area, of 10 to 25 ppm has been established for PCBs in soils by EPA. In determining the appropriate cleanup level within this range, EPA must consider factors such as exposure assumptions and threat to ground water. Since the potential for exposure to PCBs is substantial due to the current operations at this Site and data indicates that PCBs have already migrated into the ground water, EPA has concluded that it would be prudent to use the lower end of this range. Therefore, a PCB action level of 10 ppm has been selected as a remedial action goal.

SUMMARY OF ALTERNATIVES:

The alternatives for remediation of the principal threats present on-Site were evaluated in the focused FS report, which is available in the information repositories noted above. Since construction of a treatment facility on the Property is precluded by the small size of the Property and limited amount of space available on the Property, such options were eliminated from consideration. In addition, the Resource, Conservation and Recovery Act (RCRA) regulates the management of hazardous waste and the Toxic Substances Control Act (TSCA) regulates the disposal of PCBs. RCRA regulations include land disposal restrictions for non-liquid hazardous waste that contain total halogenated organic compounds (HOCs), including PCBs, at concentrations greater than 1,000 ppm. TSCA regulates PCBs at concentrations of 50 ppm or greater. Under TSCA, soils contaminated with PCBs at concentrations greater than or equal to 50 ppm can be incinerated in an incinerator, treated by an equivalent method or disposed of in a chemical waste landfill.

Although in-situ vitrification and in-situ stabilization/solidification technologies were evaluated in the focused FS, EPA eliminated these processes from consideration because under TSCA these methods are not considered to be equivalent treatment methods in comparison to incineration. Also, excavation with off-Site disposal and ex-situ stabilization/solidification processes were initially evaluated by the PRPs but were eliminated, by EPA, from consideration since they would not comply with the Land Disposal Restrictions established by RCRA. These processes have also been tested and documented on PCB contaminated media at EPA's Risk Reduction Engineering Laboratories and it has been concluded that additional testing needs to be performed to ensure their reliability. The remedial alternatives for the East Lot soil that have been selected for detailed evaluation are the following:

1: No Action
2: Surface Pavement
3: Excavation with Off-Site Incineration

Alternative 1:

NO ACTION

Capital Cost: $ 0
Time to Implement: —

Superfund regulations require that the No Action alternative be evaluated at every site to establish a baseline for comparison. Under this alternative, deed restrictions prohibiting soil excavation and the construction of buildings would be instituted. Furthermore, this alternative would preclude any further scrap metal operations on the Property. Fencing presently exists around the East Lot which limits access by animals and the general public. The PCB action level of 10 ppm will not be achieved with the implementation of this alternative.

Alternative 2:

SURFACE PAVEMENT

Capital Cost: $ 232,000
Time to Implement: 3.5 months

This alternative, as described in the focused FS report, involves the placement of a concrete pad and asphalt cover over the East Lot soil (approximately 2500 square feet). This alternative does not involve the removal of the contaminated soil, therefore, the action level of 10 ppm will not be achieved. Under this alternative, deed restrictions prohibiting activities that would damage the integrity of the surface pavement would be placed on the Property. For example, soil excavation and the construction of buildings would be not be allowed. Routine inspection and repairs would be performed as maintenance activities.

Alternative 3:

EXCAVATION, OFF-SITE INCINERATION

Capital Cost: $ 6,000,000
Time to Implement: 8 months

This alternative involves excavation of the contaminated East Lot soil (approximately 1800 yd^3), followed by transportation to an off-Site

RCRA/TSCA incinerator for treatment and disposal. The actual volume of contaminated soil will be based upon an action level of 10 ppm for PCBs in unsaturated soils, (as discussed in the Summary of Site Risk Section, above) and may be further refined during Remedial Design/Remedial Construction. Using an action level of 10 ppm for PCBs, determined from the EPA Guide on Remedial Actions at Superfund Sites with PCB Contamination, should reduce the presence of other contaminants in unsaturated soils to acceptable levels. Due to the presence of PCBs in the soil, the incineration facilities require that the soil be drummed prior to incineration. Thus, the excavated soil would be placed into 55-gallon poly or fiber drums, on the Property, and transported to the RCRA/TSCA incinerator facility for treatment. The off-site shipment of hazardous substances to a treatment, storage or disposal facility would be subject to EPA's policy for off-site management of Superfund wastes (i.e., Revised Procedures for Planning and Implementing Off-Site Response Actions, November 13, 1987, as updated). After excavation, the East Lot would be backfilled and graded with clean soil. A surface cap, as described in Alternative 2 would be placed over it. This measure would be implemented to reduce the potential for any future releases of hazardous substances into the soil from scrap metal operations on the Property.

EVALUATION CRITERIA:

This section describes the requirements of CERCLA in the remedy selection process. Remedial treatment alternatives are evaluated using the following seven criteria:

Overall Protection of Human Health and the Environment: This criterion addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls.

Compliance with ARARs: This criterion addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements (ARARs) of Federal and State environmental statutes (other than CERCLA) and/or provide grounds for invoking a waiver.

Long-term Effectiveness: This criterion refers to the magnitude of residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.

Reduction of Toxicity, Mobility or Volume: This criterion addresses the degree to which a remedy utilizes treatment to reduce the toxicity, mobility, or volume of contaminants at the Site.

Short-Term Effectiveness: This criterion refers to the time in which the remedy achieves protection, as well as the remedy's potential to create adverse impacts on human health and the environment that may result during the construction and implementation period.

Implementability: Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the selected alternative.

Cost: Cost includes capital and operation and maintenance costs.

State Acceptance: This criterion indicates whether, based on its review of the focused RI/FS and the Proposed Plan, the State concurs with, opposes, or has no comment on the preferred alternative. This criterion will be addressed when State comments on the Proposed Plan are received.

Community Acceptance: This criterion will be assessed in the Responsiveness Summary section of the Record of Decision following a review of the public comments received on the focused RI/FS reports and the Proposed Plan.

COMPARATIVE ANALYSIS OF ALTERNATIVES:

This section provides a summary of the evaluation of each alternative against the first seven CERCLA criteria described above. The criteria which address state and community

acceptance will be evaluated following the public comment period.

1: OVERALL PROTECTION: The No Action alternative would not provide adequate protection of human health by eliminating, reducing, or controlling risk due to contaminated soils through treatment, engineering controls, or institutional controls. The No Action alternative is not an acceptable remedial alternative given the current risk posed to Site workers exceeds the recommended risk range of 10^{-4} to 10^{-6}. Although Alternative 2: Surface Pavement, will reduce infiltration of water, it is not considered to be protective of the environment because impermeable bottom liner which prevents the contaminants from leaching into ground water is not associated with the design. This would still be the case even if the proposed surface pavement were replaced by a multi-layer design surface cover used for hazardous waste landfills. Alternative 3, Excavation with Off-Site Incineration, is the only alternative that is protective of public health and the environment.

2: COMPLIANCE WITH ARARS: Each of the three alternatives could be performed in compliance with ARARs (although the cap associated with Alternative 2: Surface Pavement might need to be upgraded to be consistent with RCRA requirements). However, Alternative 3: Excavation with Off-Site Incineration is the only alternative which complies with EPA's Guide on Remedial Actions at Superfund Sites with PCB Contamination.

3: LONG TERM EFFECTIVENESS AND PERMANENCE: The No Action alternative would not provide a permanent or effective remedy. Surface paving may not be effective in the long term. This alternative would rely heavily upon maintenance activities to ensure its effectiveness. Therefore, Surface Paving is not a permanent option. The Excavation, Off-Site Incineration Alternative is the only alternative with demonstrated long-term effectiveness. A concrete pad and asphalt cover will also be placed over the East Lot. Since the contaminants are destroyed, it also attains the greatest degree of permanence.

4: REDUCTION OF TOXICITY, MOBILITY or VOLUME: Both the No Action and Surface Pavement alternatives do not utilize treatment to provide a reduction in the toxicity, mobility or volume of the chemicals in the East Lot soil. Excavation with Off-Site Incineration will attain the greatest reduction of toxicity, mobility and volume of hazardous substances because the quantity of hazardous substances would be significantly reduced during incineration.

5: SHORT TERM EFFECTIVENESS: Since it involves no protective measures, the No Action alternative would not create additional short term risks. The short term risks associated with the Surface Pavement alternative involve the potential exposure to vapors and fugitive dust emissions during surface grading activities. There is an increased risk of short-term exposure during implementation of the Off-Site Incineration Alternative since it involves excavation of contaminated soils. Engineering controls, such as periodically wetting the ground surface with water, will be implemented in order to mitigate the fugitive dust release of contaminants into the air. An air monitoring program will monitor for volatile organic emissions and respirable dust emissions. Since the implementation of proper health and safety procedures will be followed, the potential for such risks will be minimized.

6: IMPLEMENTABILITY: To implement the Surface Pavement or the Excavation with Off-Site Incineration options the Site would have to cease operation for a period of time sufficient to successfully implement either remedial action.

7: COST: The No Action alternative is the least costly, but most detrimental to human health and the environment. The cost of the alternatives are as follows:

1: No Action	$ 0
2: Surface Pavement	$ 232,000
3: Excavation with Off-Site Incineration	$ 6,000,000

8: STATE ACCEPTANCE: The State of New Jersey concurs with the preferred alternative described in this Proposed Plan.

9: COMMUNITY ACCEPTANCE: Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the Record of Decision for the Site.

SUMMARY OF THE PREFERRED ALTERNATIVE:

The preferred alternative for cleaning up the PCB contaminated soils at the Curcio Scrap Metal, Inc. site is Alternative 3; Excavation with Off-Site Incineration of approximately 1800 yd^3 of soils with PCB concentrations ranging up to 6200 ppm.

In order to ensure the complete removal of PCB contaminated soils greater than or equal to the 10 ppm action level, unsaturated soil will be excavated to the water table, where existing data indicates contamination into the saturated zone. Where data demonstrate that unsaturated soils above the water table are less than 10 ppm, confirmatory sampling will be conducted to ensure that all soils containing PCBs above this action level are removed.

In summary, Alternative 3: Excavation with Off-Site Incineration would achieve substantial risk reduction through the removal of unsaturated soils contaminated with PCBs above 10 ppm. This reduction would be permanent since the PCBs and organics would be destroyed through incineration. Incineration also offers the most significant reduction in toxicity, mobility and volume that has been demonstrated. This alternative also attains ARARs. This alternative is believed to provide the best balance among the alternatives with respect to the evaluation criteria. Based on the information available at this time, EPA believes the preferred alternative would be protective of human health and the environment, would comply with ARARs and would satisfy the statutory preference for remedies which utilize treatment and permanent solutions to the maximum extent practicable.

EPA, in consultation with NJDEP, may modify the preferred alternative or select another response action presented in the Proposed Plan and the FFS Report based on new information or public comments. Therefore, the public is encouraged to review and comment on <u>all</u> the alternatives explained here.

United States
Environmental Protection Agency

Region II
26 Federal Plaza
New York, NY 10278